

# Petr Stepanov

Software developer. User interface designer.

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> Ph.D. graduate in physics with a focus in GUI \*\*desktop software development\*\* for data analyses. More than 5 years in website a

## Summary of Qualifications

- \* Strong Object Oriented Programming (OOP) and debugging skills (C++, Java, Python). Knowledge of modern IDEs (Eclipse, XCode, VSCode)
- \* 3+ years in building responsive web apps with modular JavaScript, HTML, and CSS. Hands-on experience with Angular and React framewor
- \* 5+ years of user interfaces (UI) with Model-View patterns (MVC, MVP). Knowledge of Qt framework.
- \* 6+ years of UI and UX wireframing and interactive prototyping skills (Figma, Sketch, Adobe) for web and mobile applications.

## Work Experience

### ### C++ Software Developer

[Thomas Jefferson National Laboratory (JLab)](<https://www.jlab.org/>), Newport News, VA, USA.

📅 Jul 2020 - Current

- \* Used Machine Learning (ML) TMVA framework to perform binary classification of thousands of signals from a data acquisition (DAQ) set
  - \* Applied CERN ROOT framework (C++) to perform statistical analysis of a significant amount (over 100 GB) of the raw exper
  - \* Utilized SLURM environment on [JLab supercomputer environment](<https://scicomp.jlab.org/scicomp/index.html>) to run resou
  - \* Proposed and implemented RAMDisk functionality on the development environment. This led to an over 60% increase in sourc

### ### Software Developer • Postdoctoral Researcher

[Catholic University of America (CUA)](<https://www.catholic.edu/index.html>), Washington, DC, USA.

📅 Jul 2020 - Current

- \* Developed a computer simulation based on the Geant4 framework (C++, CMake, Eclipse IDE, gdb) to study the optical properties of a no
  - \* Program accounts on scintillation material properties - composition, transmittance, luminescence.
  - \* Code reconstructs detector response (PMT or MPPC) depending on the quantum efficiency curve.
  - \* Visualization of optical photon trajectories concerning their energy or creator process.
  - \* Enhanced debugging of the core library source code led to the publishing of more than [10 bug reports]([### ### Software Developer • Research Assistant](https://root-</a></li></ul></li></ul></div><div data-bbox=)

[Bowling Green State University (BGSU)](<https://www.bgsu.edu/>), Bowling Green, OH, USA.

📅 Aug 2014 - May 2020

- \* Wrote three desktop GUI programs for spectra fitting and interpretation (C++, CMake, ROOT, Qt, Java)
  - \* GitHub repositories contain over 10k lines of code in total: [TLIST Processor](<https://github.com/petrstepanov/tlist>)
  - \* Extended default ROOT GUI library (Qt-based) to support the MVP design pattern.
  - \* Developed static website (Hexo, Gulp, Bootstrap) and visual identity for the [SelimLab](<http://physics.bgsu.edu/seli>)
  - \* Maintained local Apache HTTP server [physics.bgsu.edu](<https://physics.bgsu.edu/>) hosting over 10 websites at the BGSU.
  - \* Created website for the [ICPA-18](<https://physics.bgsu.edu/icpa18/>) international conference with registration (over 150

### ### Frontend Developer, UI/UX Designer • Freelance

📅 Sep 2012 - Current

- \* Designed and built an online e-commerce store [Sticker Store LLC](<https://bimmersticker.store/>) with a static website generator (Fig
  - \* Improved the Google PageSpeed Insights metrics (CLS, LCP) up to 97%.
  - \* Created a recursive script to export over 300 products from YAML file to Google Merchant.
  - \* Optimized SEO. The project reached over 1400 organic monthly users.
  - \* Made iOS application (Swift, UIKit, storyboards) for the [We.Team](<https://we.team/en/>) messenger (more than 3k mont
  - \* Migrated the landing page for [Sweetbridge](<https://sweetbridge.com/>) company from WordPress to Jekyll static site gener
  - \* Developed the front-end part (Angular.js, HTML, LESS) for [Lili Social](<https://myli.li/>) network.
  - \* Assisted with iOS mobile application (Ionic).
    - \* Enabled SEO crawling of over 1000 Angular.js pages with Google bot.
  - \* Web design.
  - \* Designed logos, UI/UX prototypes (Figma, Sketch, Illustrator) and branding identity for over [10 different companies]
    - \* Converted numerous design assets and mockups into responsive HTML and CSS.
    - \* Mocked up and integrated dozens of cross-browser responsive email templates.

## Computer Science Skills

- **Essentials.** Git, SVN, SSH, Linux, and Terminal usage. BASH scripting. IDEs: Eclipse, Xcode, Visual Studio Code (VS Code).
- **Project management.** JIRA, Trello, GitHub, GitLab.
- **Desktop app development.** C/C++, GNU make, CMake. Frameworks: Qt, CERN ROOT, Geant4. Java and Swing. Python.
- **Frontend:** HTML, CSS (LESS and SASS), Bootstrap, responsive web design, JavaScript and jQuery, npm, gulp, AngularJS, React.js. Google Web Toolkit. PHP and WordPress themes development.
  - **Backend.** Node.js, Express.JS (EJS), Java.
  - **UI/UX design.** Figma, Sketch, InVision Studio, Adobe XD, Adobe Photoshop, Adobe Illustrator, Inkscape, Balsamiq, Blender.
  - **Apple iOS.** Fundamental Swift skills. User interface development with UIKit and storyboards.

## Education

### Bowling Green State University (BGSU) • Ohio, USA

📅 Aug 2014 - May 2020

Ph.D. in Photochemical Sciences • GPA 3.423. Novel developments in positron annihilation spectroscopy techniques—from experimental set

### British Higher School of Art and Design (BHSAD) • Moscow, Russia

📅 Dec 2011 - Feb 2012

Three-month intensive in Graphical Design and Visual Communications. Lectures and hands-on experience in graphic design and user inter

## Professional Networks

- Discover my professional contacts [on LinkedIn](#) (200+ connections).
  - Find examples of my code [on GitHub](#) (50+ repositories).
  - Check out my UI design portfolio [on Dribbble](#) (50+ shots).

## Interests

Linux and open-source software. Hosting an [open-source project](#) for keyboard remapping on Linux (300 stars on GitHub).